

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) David J. Schlyer, et al.

Attorney Docket No.: BSA 03-15

For: POSITRON EMISSION TOMOGRAPHY WRIST DETECTOR

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In order to fulfill the requirements of candor and good faith set forth in 37 C.F.R. §1.56, Applicants submit herewith the following Information Disclosure Statement in accordance with the provisions of 37 C.F.R. §1.97 and §1.98.

UNITED STATES PATENTS

| <u>PATENTEE</u> | <u>PATENT NO.</u> | <u>ISSUE DATE</u> |
|------------------------|--------------------------|--------------------------|
| O'Connor | 5,793,254 | August 11, 1998 |
| Rogers, et al. | 4,864,140 | September 5, 1989 |

NON-PATENT PUBLICATIONS

1. J.-F. Pratte, et al., "Design of a Fast-Shaping Amplifier for PET/CT APD Detectors with Depth-of-Interaction", *IEEE Transactions on Nuclear Science*, Vol. 49, No. 5, pp. 2448-2454, October 5, 2002.

2. Paul O'Connor, et al., "Prospects for Charge Sensitive Amplifiers in Scaled CMOS", *Nuclear Instruments and Methods in Physics Research*, Section A, Vol. 480, pp. 713-725, March 27, 2002.
3. G. De Geronimo, et al., "Front-End Electronics for Imaging Detectors", *Nuclear Instruments and Methods in Physics Research*, Section A, Vol. 471, pp. 192-199 (2001).
4. P. Vaska, et al., "Effects of Inter-Crystal Cross-Talk on Multi-Element LSO/APD PET Detectors", pp. 1-3, April 19, 2002.
5. A. Kriplani, et al., "Comparison of Experimentally Measured Light Output with Monte Carlo Simulations from LSO Crystals", pp. 1-2 (2001).
6. C. Woody, et al., "RatCAP: A Small, Head-Mounted PET Tomograph for Imaging the Brain of an Awake RAT", *Elsevier Science* pp. 1-4, May 2003.
7. P. Vaska, et al., "RatCAP: Miniaturized Head-Mounted PET for Conscious Rodent Brain Imaging", pp. 1-2, May 16, 2003.
8. S. Shokouhi, et al., "System Performance Simulations of the RatCAP Awake Rat Brain Scanner", pp. 1-2, October 2003.
9. B.J. Pichler, et al., "A 32-Channel LSO Matrix Coupled to a Monolithic 4x8 APD Array for High Resolution PET", abstract, *Proceedings of 2000 IEEE Med. Imag. Conf.* (2000).
10. G. De Geronimo, et al., "A CMOS Fully Compensated Continuous Reset System", *IEEE Transactions on Nuclear Science*, Vol. 47, No. 4, pp. 1458-1462, August 2000.
11. P. Vaska, et al., "Imaging the Unanesthetized Rat Brain with PET: A Feasibility Study", *IEEE*, pp. 1569-1571 (2002).

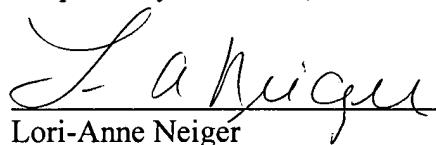
12. Shokouhi, et al., "A Non-invasive LSO-APD Blood Radioactivity Monitor for PET Imaging Studies", pp. 1-5, November 10, 2002.
13. S.R. Cherry, et al., "MicroPET: A High Resolution PET Scanner for Imaging Small Animals", *IEEE Transactions on Nuclear Science*, Vol. 44, No. 3, pp. 1161-1166, June 1997.
14. S. Shokouhi, et al., "A Non-invasive LSO-APD Blood Radioactivity Monitor for PET Imaging Studies", pp. 1-2 (2002).
15. S. Shokouhi, et al., "A Non-invasive LSO-APD Blood Radioactivity Monitor for PET Imaging Studies", pp. 1-2 (2003).
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17. J.F. Pratte, et al., "Front-end Electronics for the RatCAP Mobile Animal Pet Scanner", pp. 1-2, October 2003.
18. P. Vaska, et al., "Imaging the Unanesthetized Rat Brain with PET: A Feasibility Study", pp. 1-2, April 20, 2001.
19. P. Vaska, et al., "Imaging the Unanesthetized Rat Brain with PET: A Feasibility Study", *IEEE*, pp. 1569-1571 (2002).
20. A. Chatziioannou, et al., "Performance Evaluation of microPET: A High-Resolution Lutetium Oxyorthosilicate PET Scanner for Animal Imaging", *The Journal of Nuclear Medicine*, Vol. 20, No. 7, pp. 1164-1175, July 1999.

21. P. van Zant, "Chapter 5: Overview of Wafer Fabrication", *Microchip Fabrication*, 3rd edition, pp. 99-118 (1997).
22. P. O'Connor, et al., "Low Noise Charge Amplifiers in Submicron CMOS", 5TH International Workshop on Front End Electronics, pp. 1-21, July 2, 2003.
23. P. Vaska, et al., "A Practical and Competitive Alternative of Mega-Crystal PET: A Miniature Anger Detector with LSO and APDs", June 2001.
24. C. Woody, "New Detectors for PET Imaging of Small, Awake Animals", Instrumentation Seminar, pp. 1-50, March 12, 2003.
25. "Scanning Lab Rats as they Scurry", Popular Mechanics, p. 22, August 2003.
26. "Électronique Du Scanner Pet", October 2002.

The above-referenced documents are listed on PTO Form 1449. We have enclosed the cited documents to facilitate reference to them.

Applicants are not aware of any other references to be identified at this time. If the Examiner has any questions or comments relating to the present application, he or she is respectfully invited to contact Applicants' attorney at the telephone number set forth below.

Respectfully submitted,



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10/16/03
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| FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE (Rev. 2-32) PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary) | ATTY. DOCKET NO. BSA 03-15 | SERIAL NO. Unassigned |
| | APPLICANT David J. Schlyer, et al. | CONFIRMATION NO. Unassigned |
| | FILING DATE Herewith | GROUP Unassigned |

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB CLASS | FILING DATE IF APPROPRIATE |
|---------------------|--|--------------------|---------|---------------|-------|--------------|-------------------------------|
| | | 5,793,254 | 8/11/98 | O'Connor | | | |
| | | 4,864,140 | 9/5/89 | Rogers et al. | | | |

FOREIGN PATENT DOCUMENTS

| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB CLASS | TRANSLATION | |
|---------------------|--|--------------------|------|---------|-------|--------------|-------------|----|
| | | | | | | | YES | NO |
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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| | | J.-F. Pratte, et al., "Design of a Fast-Shaping Amplifier for PET/CT APD Detectors with Depth-of-Interaction", <i>IEEE Transactions on Nuclear Science</i> , Vol. 49, No. 5, pp. 2448-2454, October 5, 2002. |
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| | | | B.J. Pichler, et al., "A 32-Channel LSO Matrix Coupled to a Monolithic 4x8 APD Array for High Resolution PET", Abstract, <i>Proceedings of 2000 IEEE Med. Imag. Conf.</i> (2000). |
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